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Please check the examination details below before entering your candidate information

Candidate surname	Other names

Centre Number | Candidate Number

Pearson Edexcel International GCSE (9–1)

Time 1 hour 30 minutes

Paper reference **4IT1/01**

Information and Communication Technology (ICT)

PAPER 1: Written Paper

You do not need any other materials.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided – *there may be more space than you need.*

Information

- The total mark for this paper is 100.
- The marks for **each** question are shown in brackets – *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ▶

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E:1/1/1/1/

P 7 1 5 5 3 A 0 1 2 0

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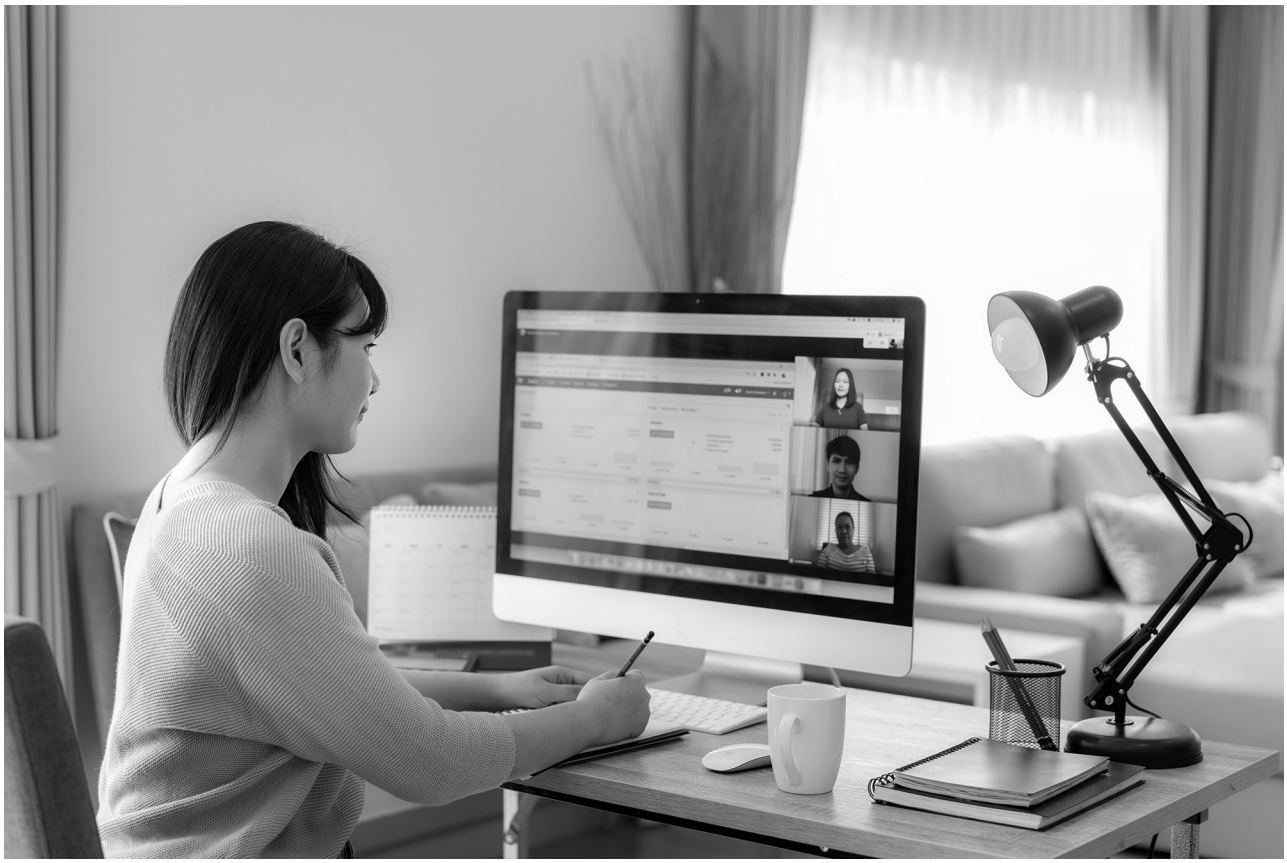
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Answer ALL questions.

Write your answers in the spaces provided.

Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.

Kay works from home.
She uses ICT for business and entertainment.



(Source: © PAL)

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1 Kay uses a laptop for work.

(a) Which **one** of these features would be improved if she used a desktop replacement?

(1)

- ☒ **A** User interface
- ☒ **B** Energy consumption
- ☒ **C** Portability
- ☒ **D** Performance

(b) Which **one** of these could prevent the risk to Kay's work data caused by accidental deletion?

(1)

- ☒ **A** Anti-malware
- ☒ **B** Backup
- ☒ **C** Encryption
- ☒ **D** Phishing

(c) Kay makes copies of her work files.

One reason magnetic tape is used for this is because it can store more data than other storage media.

Explain **one other** reason magnetic tape is a good choice.

(2)

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(d) Kay often prints her work.

(i) Describe how an inkjet printer works.

(2)

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(ii) A printer has 32 MiB of cache memory.

Construct an expression to show how many bits are in 32 MiB.

(3)

(iii) State the output device that would produce this object.



(Source: © PAL)

(1)

(e) Draw **one** straight line from **each** characteristic to the correct hardware.

(3)

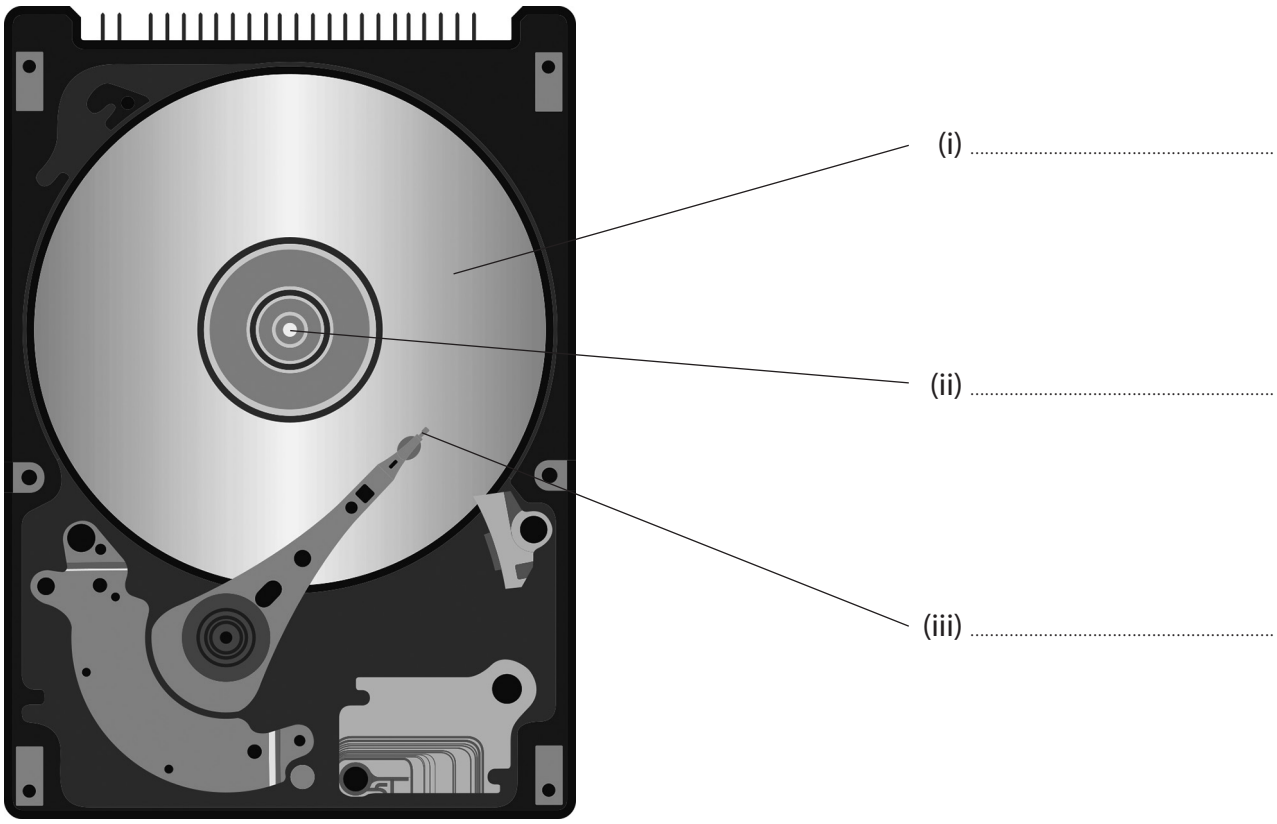
Characteristic	Hardware
Has the largest capacity	Compact disc
Stores applications while they are in use	Magnetic disk
Stores instructions needed to load the operating system	Random access memory
	Read only memory

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(f) Complete the labelling of this image of a storage device.

(3)



(Source: © PAL)

(g) Explain **one** benefit of increasing the size of RAM in a laptop.

(2)

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(h) Explain why print spooling is necessary.

(2)

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(Total for Question 1 = 20 marks)

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2 Kay uses a range of software.

(a) State the type of utility software that prevents data from being understood without using a key.

(1)

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(b) State **one** reason why data is compressed before being transferred across a network.

(1)

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.....

(c) Describe how utility software can reduce access times for large files stored on magnetic media.

(2)

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(d) State **two** types of application software.

(2)

1 .....

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2 .....

.....

(e) Which **one** of these identifies how OMR recognises text?

(1)

- ☒ **A** Magnetic
- ☒ **B** Online
- ☒ **C** Optical
- ☒ **D** Random

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(f) Describe how application software is different from systems software.

(2)

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(g) State **two** key features of a blog that are different from the key features of a website.

(2)

1 .....

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2 .....

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(h) Kay uses software to protect her from risks online.

(i) Which **one** of these is an example of phishing?

(1)

☒ **A** Email pretending to be from a bank

☒ **B** Encrypting data

☒ **C** Redirecting web traffic to a fake site

☒ **D** Website code copied without permission

(ii) Which **one** of these is a risk of phishing?

(1)

☒ **A** Connectivity fault

☒ **B** Data deletion

☒ **C** Fraudulent activity

☒ **D** Power reduction

(Total for Question 2 = 13 marks)

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3 Kay can access goods and services online.

(a) Online transactions can be tracked.

Which **one** of these is used for transaction tracking?

(1)

- ☒ **A** Authentication
- ☒ **B** Backups
- ☒ **C** Cookies
- ☒ **D** Debit cards

(b) One type of online service is education and training.

(i) Give **one other** type of online service.

(1)

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.....

(ii) List **two** features of a virtual learning environment (VLE).

(2)

1 .....

.....

2 .....

.....

(c) Which **one** of these describes people who are 'information poor'?

(1)

- ☒ **A** Limited access to technology
- ☒ **B** Phishing victims
- ☒ **C** Rural communities using 4G technology
- ☒ **D** Write access, rather than read access

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(d) Describe **two** positive impacts of the Internet on organisations.

(4)

1 .....

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2 .....

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(e) Describe **two challenges** of using an acceptable behaviour policy with an online community.

(4)

1 .....

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2 .....

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(f) Explain **two** reasons why hosted applications are a better choice than local applications for editing graphics from a smartphone.

(4)

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(Total for Question 3 = 17 marks)

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4 Kay uses the Internet to work from home.

(a) Kay does not have to waste time travelling to work.

Describe **one other** positive impact the Internet has on how Kay works.

(2)

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(b) When Kay logs on to a browser application at home she sees the bookmarks that she saved when she was in the office.

Describe how this is made possible.

(2)

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(c) Which **one** of these is the role of an ISP?

(1)

- ☒ **A** Connects webpages to intermediate servers
- ☒ **B** Gives users access to the Internet
- ☒ **C** Prevents security leaks of company information
- ☒ **D** Sets up a portal for immediate access

(d) Complete the description of a secure password.

(2)

A secure password should use a minimum of eight ..... and a mixture of ..... and .....

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(e) Kay is searching for some information online.

Describe **two** ways that Kay can make effective use of a search engine to select information.

(4)

1 .....

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2 .....

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(f) Kay reduces the risk of electric shock by not having uncovered drinks near her laptop.

Complete the table to show **two other** health and safety risks of using ICT and **one** method of prevention for **each** risk.

(4)

Health and safety risk	Method of prevention

(g) Which **one** of these is used to connect a local area network to a wide area network?

(1)

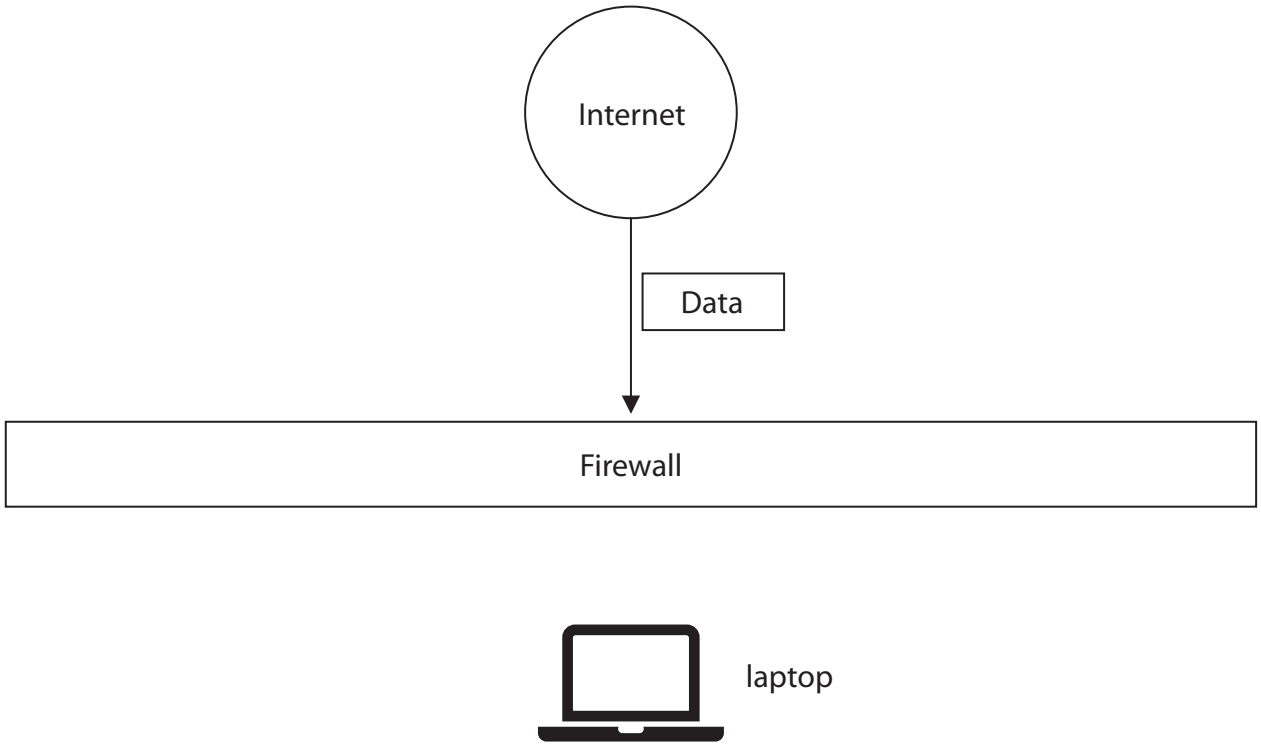
- ☒ **A** Gateway
- ☒ **B** Router
- ☒ **C** Wireless access point
- ☒ **D** Modem

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(h) This diagram shows data sent to a laptop.



Describe how the firewall acts on the data that has been sent to the laptop.

(2)

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(i) State **two** ways devices are identified on a network.

(2)

1 .....

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2 .....

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(j) Discuss the use of wireless and wired connectivity for a home network.

(8)

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(Total for Question 4 = 28 marks)

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5 Kay likes to listen to music.

(a) Kay connects her smartphone to her home entertainment system.

(i) Explain **one** advantage of connecting her smartphone to her home entertainment system.

(2)

(ii) Give **two other** types of device that Kay could connect to her smartphone.

(2)

1 .....

2 .....

(b) Explain **one** benefit to Kay's lifestyle of being able to listen to audio streamed online, rather than downloading it.

(2)

(c) Explain **one** drawback to musicians of sharing their music online.

(2)

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(d) Explain **one** drawback of using cloud storage to back up a digital film library.

(2)

(e) Explain **one** reason why films often appear pixelated when they first load from online streaming services.

(2)

(f) Kay is visually impaired.

List **two** ways that an ICT system can be configured to meet the needs of someone with limited eyesight.

(2)

1

2

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(g) Evaluate the choices society must make between the expanding use of ICT and the need to protect the environment.

(8)

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(Total for Question 5 = 22 marks)

TOTAL FOR PAPER = 100 MARKS

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